

REMARKS

Claims 1-2, 4-8 and 10-16 remain in the application, claims 3, 9, and 17-24 having been canceled. Independent claims 1 and 11 have been amended to include the limitations of wherein the metal gate does not substantially diffuse into the high k gate dielectric layer. Support for this amendment can be found in paragraph 25 of the present application, for example. No new subject matter has been added with these amendments.

A. 35 U.S.C. § 103(a)

M.P.E.P. 706.02(j) sets forth the standard for a Section 103(a) rejection:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Tsukamoto in view of Chau-Claim 1-5, 7, 8, 10-16

Claims 1-5, 7, 8, 10-16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsukamoto in view of Chau (Office Action, page 2). The Office contends (to which the Applicants do not concede) it would have been obvious to combine Chau's teaching of a high k dielectric with Tsukamoto's invention, since it would help reduce gate leakage.

"To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). However, independent claims 1 and 11, from which claims 2-5, 7, 8, 10 and 16 depend

respectively, have been amended to include the limitations of wherein the metal gate does not substantially diffuse into the high k gate dielectric layer. Neither Tsukamoto nor Chau teach this limitation, which the Office refers to but which Applicants do not encounter within Tsukamoto. Because neither Tsukamoto nor Chau teach or even suggest the limitations of claims 1-5, 7, 8, 10-16, these claims are not rendered obvious by Tsukamoto in view of Chau. Applicants will not address at this time the rejections of the dependent claims, since they are allowable for at least the reasons the independent claims from which they depend are allowable. Thus, reconsideration and withdrawal of the Section 103(a) rejection of claims 1-5, 7, 8, 10-16 is respectfully requested.

Tsukamoto in view of Chau and further Goto-Claim 6

Claim 16 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsukamoto in view of Chau and further in view of Goto (Office Action, page 4). The Office contends (to which the Applicants do not concede) it would have been obvious to pulse the laser beam at 20 ns or less since such time ranges are within routine experimentation and optimization.

“To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.” In *re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). Because Tsukamoto, Chau nor Goto teach or even suggest the limitations of amended claim 1 (as discussed above) from which claim 6 depends, claim 6 is not rendered obvious by Tsukamoto in view of Chau and Goto. Thus, reconsideration and withdrawal of the Section 103(a) rejection of claim 6 is respectfully requested.

Zhang in view of Chau-Claims 1-3, 5, 7-8, 10-16

Claims 1-3, 5, 7-8, 10-16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Zhang in view of Chau (Office Action, page 4). The Office contends (and Applicants do not concede) it would have been obvious to include Chau in the invention of Zhang to reduce the gate leakage.

“To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.” In *re Royka*, 490 F.2d 981,180 USPQ 580 (CCPA 1974). Because neither Zhang nor Chau teach or even suggest the limitations of amended claims 1 and 11 as above, claims 1-3, 5, 7-8, 10-16 are not rendered obvious by Zhang in view of Chau. Thus, reconsideration and withdrawal of the Section 103(a) rejection of claim 1-3, 5, 7-8, 10-16 is respectfully requested.

Zhang in view of Chau and further Goto-Claim 6

Claim 6 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Zhang (Office Action, page 6). The Office contends (and Applicants do not concede) it would have been obvious to pulse the laser beam at 20 ns or less since such time ranges are within routine experimentation and optimization.

“To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.” In *re Royka*, 490 F.2d 981,180 USPQ 580 (CCPA 1974). Because Zhang, Chau nor Goto teach or even suggest the limitations of amended claim 1, from which claim 6 depends, claim 6 is not rendered obvious by Zhang in view of Chau and Goto. Thus, reconsideration and withdrawal of the Section 103(a) rejection of claim 6 is respectfully requested.

In view of the foregoing remarks, the Applicants request allowance of the application.
Please forward further communications to the address of record. If the Examiner needs to
contact the below-signed Attorney to further the prosecution of the application, the contact
number is (480) 715-5488.

Respectfully submitted,

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